

The Endangered Parrots of Indonesia

by Rosemary Low, Mansfield, England.

Indonesia is the world's largest archipelago. It is said to consist of more than 13,000 islands but it is dominated by just five of these—Sumatra, Kalimantan (Indonesian Borneo), Java, Sulawesi and Irian Jaya (the Indonesian part of New Guinea). It is home to 75 species of parrots, which is more than any other country; Brazil has 71 species and Australia has 52.

Indonesia has a fascinating range of parrots: lorries, cockatoos, pygmy parrots, fig parrots, the Blue-rumped Parrot (*Psittinus cyanurus*), tiger parrots (*Psittacella*), Geoffroy's Parrots, racket-tailed parrots (*Prioniturus*), *Tanygnathus* parrots such as the Great-bill (*T. megalorhynchus*), Eclectus, Amboina King Parrot (*Alisterus amboinensis*), Timor Crimson-winged Parakeet (*Aprosmictus jonquillaceus*) and hanging parrots. The western extremity of Indonesia can include such Asian species as Moustache and Long-tailed Parakeets. Its parrots are more varied than those of any other region in the world.

This is mainly because of its great diversity of habitats, which include many different types of forest. Although Indonesia covers only 1% of the world's land surface, 17% of the world's birds are found there and 10% of the world's plant species. It has a very high percentage of endemism among its birdlife—that is, species which are not found anywhere else outside of their island or group of islands.

Unfortunately, the most important statistic about Indonesia from our point of view is that it has more threatened bird species than any other country on earth. The total is 104. Brazil is a close second with 103 species. The total number of threatened birds worldwide is 1,111 (Collar, et al, 1994), therefore Indonesia has 9.4%.

Endangered Parrots

So far I seem to have bombarded the reader with figures, so now let us look at the parrot species which are endangered—and why.

Reasons For Decline

It is very clear that deforestation and trapping are the factors which have done most damage to parrot populations in Indonesia in that order, chronologically. Most of the parrots mentioned above were unknown in aviculture until the early 1970s when logging opened up the previously inaccessible areas they inhabited. The logging companies built roads where there had been none. This resulted in people settling in formerly uninhabited areas. The birdlife was abundant and the people soon realized that there was money to be made from trapping birds. This is why the early 1970s saw the greatest influx of "new" species that aviculture has ever known.

Trapping continued at an alarming and unsustainable rate until the mid 1980s. Then it was discovered that trappers of some species were unable to catch so many birds because flock sizes had declined. In some areas some species were being trapped almost to extinction. The first scientific study of the effects of trade soon followed. Funded by The World Wide Fund for Nature and IUCN, it investigated the trade in parrots on two Moluccan islands during 1985. An estimated 180,000 to 200,000 Moluccan parrots were reported traded during 1981 to 1984—yet only nine species were involved in this trade. That means that an average of 5,000 birds per year of each species were reported in trade. Probably as many more, however, were illegally exported or

Table 1

Species	Status	Reason
Red and Blue Lory (<i>Eos bistris</i>)	Endangered	Trade, habitat loss
Black-winged Lory (<i>Eos cyanogenia</i>)	Vulnerable	Trade, habitat loss
Mitchell's Lorikeet (<i>T.b. mitchellii</i>)	Endangered	Trade, habitat loss
Iris Lorikeet (<i>Trichoglossus iris</i>)	Vulnerable	Unknown
Chattering Lory (<i>Lorius garrulus</i>)	Vulnerable	Trade, habitat loss
Purple-capped Lory (<i>Lorius domicellus</i>)	Vulnerable	Trade and?
Blue-fronted Lorikeet (<i>Charmosyna toxopei</i>)	Vulnerable	Unknown
Lesser Sulphur-crested Cockatoo (<i>Cacatua s. sulphurea</i>)	Endangered	Trade, habitat loss
Citron-crested Cockatoo (<i>C.s.citrinocristata</i>)	Endangered	Trade, habitat loss
Moluccan Cockatoo (<i>Cacatua moluccensis</i>)	Vulnerable	Trade
Umbrella Cockatoo (<i>Cacatua alba</i>)	Vulnerable	Trade, habitat loss
Blue-naped Parrot (<i>Tanygnathus lucionensis</i>)	Endangered	Trade, habitat loss
Black-lored Parrot (<i>Tanygnathus gramineus</i>)	Vulnerable	Unknown
Pesquet's Parrot (<i>Psittichas fulgidus</i>)	Vulnerable	Hunting, habitat loss
Sangihe Hanging Parrot (<i>Loriculus catamene</i>)	Endangered	Habitat loss
Wallace's Hanging Parrot (<i>Loriculus flosculus</i>)	Vulnerable	Habitat loss
Salvadori's Fig Parrot (<i>Psittaculirostris salvadorii</i>)	Vulnerable	Habitat loss, trade

Definition of Status

Endangered: faces a high risk of extinction in the wild in the immediate future.
Vulnerable: faces a high risk of extinction in the wild in the medium-term future.

died before they could enter trade. The parrots involved were Chattering (and Yellow-backed) Lories, Violet-necked, Red and Blue-streaked Lories (*Eos* species), Green-naped Lorikeets, Umbrella, Moluccan and Goffin's Cockatoos and Amboina King Parrots.

The most endangered by trapping was the Moluccan Cockatoo which some believed (e.g., Wirth, 1990) was critically endangered by the time it was placed on Appendix 1 of CITES in 1989. In 1992, the Goffin's Cockatoo was also placed on Appendix 1 of CITES. Despite the fact that two of the most threatened species were then prohibited from commercial trade, illegal trapping continued. Indonesia did little to protect the other parrots trapped in large numbers. However, in 1988 the countries in the European Community prohibited the most threatened species, such as Blue-streaked and Purple-capped Lories, from entering its member countries and soon after, of course, the importation of all wild-caught birds into the USA was curtailed.

Unfortunately, this did not stop the export of Indonesian parrots; it merely diverted them to countries without morals where threatened parrots were concerned, such as some European countries and Japan.

I will now provide information on each of the threatened parrots of Indonesia,

Red and Blue Lory

(*Eos histrio*)

This lory is an almost unique case of how a parrot can be endangered by trade without specific demand. It was literally unknown in aviculture until only five years ago. There was always a local trade, within the Sangihe and Talaud islands, the only places where it occurs. These islands form a chain from northern Sulawesi to Mindanao in the Philippines. Then suddenly, hundreds of birds were captured and exported. In 1992 about 1,000 were captured, at least 700 of which were exported. In that year, at least 200 died from disease and neglect at the premises of one dealer in Jakarta. I saw dozens crowded together in the cages of a dealer in Singapore. This would have been appalling whatever the

species. It was especially sad in the case of the Red and Blue Lory which had never been seen in aviculture in Europe or the USA. Breeders there would have cherished these beautiful lories and would soon have established them. But they were not allowed to be imported. Most of those that survived must have ended up as pets in countries where there is no avicultural expertise. Fortunately, two consignments went to South Africa before their importation there was also banned. It is ironic that the more responsible countries, those with a high level of avicultural skills, did not permit the importation of these lories, most of which would not have survived long in the countries which did allow their entry. However, a few birds did reach the Netherlands; they have been bred there, in South Africa and in Singapore. They will be established in aviculture but with a small gene pool, which may prove problematical in the long term.

There are three sub-species of the Red and Blue Lory. In 1995 a combined expedition from York university in the UK and from an Indonesian university went to Sangihe where the nominate race is found. Until then the Red and Blue Lory was believed extinct there, but the expedition members found some small groups of two to six birds. The status of the sub-species *challengeri* from the Miangas and Nenus Islands is unknown as no ornithologist has been able to visit these remote islands. It is feared extinct because islanders questioned recently had no knowledge of it. Only the sub-species *talautensis* survives in any numbers. There are believed to be about 2,000 birds on the island of Karakelong. However, these are threatened by trade, even though the Red and Blue Lory was placed on Appendix 1 of CITES in 1994. Trapping continues and the main trapping season coincides with the breeding season, so one can guess that many more birds are removed from the population than those trapped; many young might die in the nest if their parents are caught.

It is obvious that an education program is urgently needed to stop the trapping. A second University of York

expedition hopes to address this problem, via radio, television and press.

Sangihe Hanging Parrot

(*Loriculus catamene*)

This little parrot was feared extinct because its original habitat has been almost completely replaced by coconut and nutmeg plantations. Fortunately, the University of York expedition found that this fear was unjustified; this Hanging Parrot was seen in plantations and in natural forest and appears to have adapted to the habitat changes. Indeed, it seemed more common in agricultural areas than in forest remnants. Nevertheless, it is an endangered species, with a precarious foothold. It is not captured for trade.

Mitchell's Lorikeet

(*Trichoglossus haematodus mitchellii*)

This lorikeet is one of the red-breasted sub-species of the Green-naped Lorikeet. It occurred only on the two small islands of Bali and Lombok to the east of Java in the Lesser Sunda Islands. On Bali, where hardly any forest has survived, it is believed to be extinct. On Lombok it probably survives high in the mountains, having been trapped to extinction at lower altitudes. The tragedy of this species is that at one time, during the late 1960s and early 1970s, it was imported into Europe fairly frequently. However, there were few lory breeders then and no idea of its endangered status. Extreme problems are now being experienced in trying to breed from the few birds in captivity, probably because of the small gene pool. (Other subspecies of the Green-naped Lorikeet are very easy to breed.)

Unfortunately, there is a strong likelihood that Mitchell's Lorikeet will become extinct in captivity and in the wild.

Iris Lorikeet

(*Trichoglossus iris*)

This beautiful small lorikeet comes from the arid islands of Timor and Wetar. Almost nothing is known about it in the wild. Timor was the site of a major political uprising in which thousands of people were killed, and the people of Wetar—formerly head-

hunters—are very inhospitable to outsiders. However, a 1993 ornithological survey of West Timor's remnant forests found it at only two localities. It was not recorded on a short visit to Wetar, although extensive forest survives there.

The Iris Lorikeet is not a common bird in aviculture. In the USA it deserves greater appreciation. It is small, mainly seed-eating (unlike other lorries) and available. Yet Roland Cristo, one of the most successful breeders of this species (with six breeding pairs) has difficulty in selling the young! This is surely because it is so little known. Here is an ideal subject for those interested in breeding threatened species which do not cost a fortune and which are easy to keep. I have kept and bred the Iris Lorikeet for 25 years and never want to be without it.

Blue-fronted Lorikeet

(*Charmosyna toxopei*)

The tiny Blue-fronted Lorikeet occurs only on the island of Buru, to the west of Seram. This mountainous island of 3,500 sq miles was used as the main internment camp for thousands of Communist prisoners after 1965. Little is known about the lorikeet which is either rare, nomadic or restricted to a certain kind of habitat. If it restricted to lowland forest, it could be seriously threatened by deforestation. It is totally unknown in captivity.

Chattering Lory

(*Lorius garrulus*)

The Chattering Lory and its subspecies, the Yellow-backed (*L. g. flavopalliat*) is one of the most popular birds to have been exported from the Moluccan Islands. Unfortunately, it was over-trapped to the degree that it is now considered a vulnerable species. The official trade figures probably represent only a proportion of the actual numbers trapped. In 1990 and 1991 the quota set by the Indonesian authority was 5,900 for each year. The catch quota for the island of Bacan in 1991 was only 250 birds yet during the period October 1991 to February 1992 research workers saw more than 2,000 in holding cages on the island. Mortality must have been quite high. One cannot help wondering about the

fate of these thousands of Chattering Lorries which left the Moluccas. Probably most of them—if they survived—lived short lives as pets with people who had no idea how to feed them properly.

Frank Lambert carried out a field survey and a trade survey on this lory and two other parrot species from the North Moluccas in 1991. He estimated that between 9,600 and 9,927 Chattering Lorries were caught in that year, of which between 1,440 and 1,985 died before they could be shipped. In other words the mortality rate was approaching 20%. Approximately 1,000 to 1,500 birds were retained for the domestic market and between 6,042 and 7,426 were exported. I think these figures alone demonstrate why the trade in wild-caught parrots is wrong—just in case anyone should still believe that it is acceptable.

Following his survey, Frank Lambert suggested that the annual catch quota should be reduced to 810 birds per year (Lambert, 1993). In 1994, PHPA, the authority responsible for setting quotas, acted on this suggestion. However, because the tradition of catching these lorries is so well established, whether the quota is actually reinforced is a different matter.

Taking into account the degree of

habitat loss and degradation that is occurring throughout its range, it is obvious that this is a threatened species. Unfortunately, because it is so beautiful and makes a good pet, there is too much emphasis in the USA on producing young for the pet trade. It is essential that more birds are parent-reared for future breeding stock if this species is to survive in US aviculture.

Purple-capped or Purple-naped Lory

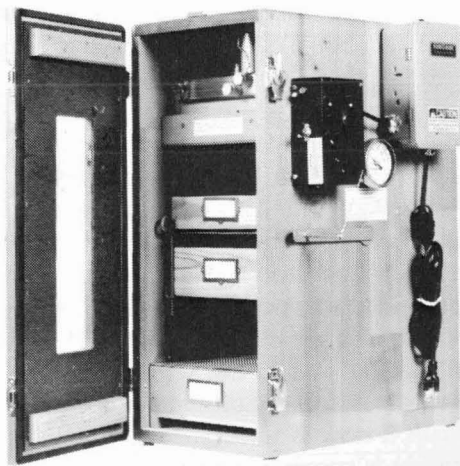
(*Lorius domicellus*)

This lory occurs only on Seram, in forested areas. The literature states that it also occurs on Buru and Amboina—but this is incorrect. It is extinct on Amboina and probably only escaped pet birds were ever found on Buru. Its population on Seram is believed to be low, probably as a result of trapping, as much good habitat survives. It is classified as a vulnerable species; although it is protected by law, there is little or no attempt to enforce this law. A popular pet bird on the island, many native people keep several Purple-caps. As this lory has been rare in aviculture since the late 1970s, it seems that the domestic trade takes most of the trapped birds.

In the USA and in Europe this lory is rare. It would be unthinkable to keep it as a pet; increasing the numbers of breeding pairs must be the pri-

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ority. In 1989 a breeding conservation program for this species was set up in Germany. After some enquiries it learned that the worldwide captive population, excluding Singapore, consisted of about 60 birds. In Singapore the numbers in two private collections alone exceed this—but what happens to the young reared there is unknown. The future of this lory in US aviculture would be secured with just a few of these birds to boost the gene pool but, of course, that is unlikely to happen.

Moluccan Cockatoo

(*Cacatua moluccensis*)

As already mentioned, trade has had a catastrophic effect on the Moluccan Cockatoo. Between 1981 and 1984 more than 20,000 Moluccan Cockatoos were reported in trade and this rate was continued until the end of the 1980s. Just think what this means. The Moluccan Cockatoo is found on only one island, Seram, and is not widespread over the island. It lays only two eggs in one clutch and the young probably remain with the parents for about one year. Therefore, this is a slow-breeding species.

Up until about 1990, it was estimated that between 4,000 and 9,000 Moluccan Cockatoos were exported from Seram every year. Most books including Forshaw's *Parrots of the World*, incorrectly give an additional three islands as the range of the Moluccan Cockatoo. It is no longer present on the small islands of Saparua and Haruku. It was introduced to Ambon (Amboina) but was believed to be extinct there by 1981. The only place it can be seen today is the Manusela National Park on Seram. But its numbers are so few that sightings are rare. Last year David Field, who runs the UK studbook for the Moluccan Cockatoo, went to Seram hoping to do some research. But he saw only a single bird in the wild. He said that he was in the wrong area, which gives some indication of how difficult it now is to locate what was formerly a common and widespread species.

Unfortunately, the Moluccan Cockatoo is an example of a species which will die out in aviculture in the USA if breeders persist in hand-rearing

all the young. Breeding successes with hand-reared males are almost nonexistent. Problems such as aggressive behavior towards the female are especially common. If this species must be hand-reared (parent rearing is often beset by problems), it is essential that young for breeding are kept in groups from weaning to maturity and that they are not encouraged to remain tame. Please do not leave this to the next person if you are a breeder of this species; if you rely on someone else you are hastening the extinction of this beautiful cockatoo in aviculture.

There is another factor to be considered. The Moluccan is an extremely sensitive and demanding bird. In my opinion, there are very few people who have the time or the understanding to care for one which has been hand-reared. Time and time again they become problem birds who scream and pull out their feathers. One exceptionally successful breeder of this species, who pulled all eggs as laid, suddenly stopped and asked himself what was he doing. He realized that he could no longer find suitable homes for the Moluccans he was hand-raising. This is a magnificent bird. All of you who are fortunate enough to keep it should ask yourself this question: is what I am doing in the best interests of the species?

Umbrella Cockatoo

(*Cacatua alba*)

Exactly the same comments apply to the Umbrella Cockatoo. It occurs on several islands of the North Moluccas and is threatened by trapping and by habitat loss. However, it is not on Appendix 1 of CITES and is slightly less sought after. It needs equal attention by concerned aviculturists.

Lesser Sulphur-crested Cockatoo

(*Cacatua sulphurea sulphurea*)

The plight of this cockatoo, a bird so well known in aviculture, is probably even worse than that of the Moluccan. What has happened to this species is extremely disturbing. It occurs on Sulawesi and almost throughout the Lesser Sunda Islands. The nominate sub-species is found on Sulawesi, Buton and islands in the Flores Sea.

It is not a protected species although it is already extinct in some areas, especially in the lowlands where its former habitat has been converted to rice fields and coconut plantations. Where it does survive, in areas of forest mixed with agriculture, there has been a major decline in numbers. It has been almost trapped out of existence by professional groups of trappers who travel around South Sulawesi. They catch entire flocks by placing glue-covered sticks in their roosting trees. This method of catching is very efficient and literally wipes out overnight all the birds in one area.

The sub-species *abbotti* occurs only on the tiny Masalembo Islands. They are located in the Java Sea mid-way between Kalimantan and Madura. The islands were visited by a team from PHPA and BirdLife in October 1993 and May 1994. The survey revealed that *abbotti* is extinct on Masalembo and that as few as eight to 10 birds survive on Masakambing. The cause is trapping for trade and hunting by oil workers on Masalembo between 1985 and 1989.

Following the survey carried out in 1994 by BirdLife International Indonesia Programme, the recommendation was made that this cockatoo should be given strict and immediate protection (Cahyadin et al, 1994). It is a tragedy that this was not carried out at least a decade ago. The next few years will show whether this cockatoo can be saved from extinction in the wild. In captivity, hybridizing has surely occurred among the yellow-crested subspecies thus even if the habitat remained, captive-bred birds might be unsuitable for reintroduction. In the Masalembo Islands, almost all the land has been converted to agriculture. The only remaining natural forest is coastal mangrove.

Citron-crested Cockatoo

(*Cacatua sulphurea citrinocristata*)

This cockatoo is found only on Sumba, where large flocks occurred until the 1970s. It is now believed to be the rarest parrot on Sumba. Again, this is due to trapping and to loss of habitat. By 1990 only 16% of the island was under some form of forest cover, including plantations and secondary forest. A 1993 population estimate of

the Citron-crested was fewer than 2,000 birds, thus it is now considered to be critically endangered. Relatively intact forest survives only in the south of the island. Within a couple of decades the Citron-crested may survive only in captivity. What a responsibility for those who keep this species at the present time! If you breed them and hand-raise them for pets, the same comments apply as for the Moluccan. If you keep a male as a pet, do not necessarily think about placing it in a breeding situation unless it is not tame. If it is wild-caught and untamed, it could be a valuable bird to increase the gene pool. If it is tame it could be a killer of females—a serious problem with this species. If it is a female and a suitable male can be found that definitely does not have a history of killing females, you could make a valuable contribution to the survival of this species if the birds are compatible and allowed to rear their own young. Hand-raised males are seldom suitable for breeding.

Blue-naped Parrot

(*Tanygnathus lucionensis*)

This is a species which has always been neglected—even ignored by aviculturists. It is a very beautiful bird and one of my own favorites. Its main distribution area is the Philippines, which is not part of Indonesia, but it also occurs in the Talaud Islands. Trade and trapping have led to its endangered status. I would appeal to breeders to give consideration to this lovely bird.

Black-lored Parrot

(*Tanygnathus gramineus*)

This parrot could be described as the Australian equivalent to the Night Parrot. It is said to be nocturnal and nothing is known about it except that two birds were supposedly seen in 1980.

Salvadori's Fig Parrot

(*Psittaculirostris salvadori*)

Since the late 1970s this beautiful little parrot has been known in aviculture. However, it is probably deforestation rather than trade which has had the most impact on its status, which is now described as vulnerable.

Unfortunately, it took some years



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for aviculturists to discover how to breed these birds. Losses were high and breeding successes few. This fig parrot is now rare and is in danger of being lost to aviculture in the near future. Only specialists who have much time to devote to their birds should keep fig parrots.

Wallace's Hanging Parrot (*Loriculus flosculus*)

This little parrot from the island of Flores, in the Lesser Sunda Islands, is threatened by deforestation. It is unknown in aviculture.

Black-winged Lory (*Eos cyanogenia*)

Found on the island of Biak and three very small islands in Geelvink Bay, Irian Jaya, this lory is now uncommon. It is threatened by trade and by the destruction of its habitat lowland forest. It is fairly well established in aviculture—but lory breeders need to pay more attention to it.

Pesquet's Parrot (*Psittichas fulgidus*)

This is my own favorite parrot—a magnificent bird which has suffered much at the hand of man. It is found in some forested areas of New Guinea. Unfortunately, its beautiful red and black wing feathers are the most prized items among native people, with a value even higher than that of bird of paradise feathers. Among the highland tribes, they are even used as bride price, that is, the highest valued items. Trade is a lesser threat but logging is also beginning to threaten them.

This species is found in a small number of zoos; I do not know of any in private collections. It has been bred at the Los Angeles and Bronx Zoos on several occasions and is being reared at Palmitos Park, Gran Canaria, and Jurong Bird Park in Singapore. It is questionable whether it will ever be truly established in captivity. Ironically, it is not such a difficult bird to breed when its needs are truly understood.

Some Good News

Finally, mention should be made of two parrots, the Goffin's Cockatoo and the Blue-streaked Lory, from the Tanimbar Islands, 182 miles (350km) north of Australia. Both were believed to be endangered until a survey was carried out by PHPA and BirdLife International in 1993. Fortunately, both species were found to be common on the island of Yamdena. The estimated population sizes there were 255,000 (plus or minus 36,000) for Goffin's Cockatoo and 220,000 (plus or minus 52,000) for the Blue-streaked Lory.

Summary

In summary, 15 species and two endemic sub-species from Indonesia are classified as endangered or vulnerable. Four of these are totally unknown in aviculture. Of the remaining 13, two (Iris Lorikeet and Pesquet's Parrot) have been trapped for trade in numbers insufficient to cause population declines. Ten of the other 11 species have suffered from the combined pressures of habitat loss and heavy trapping and one, the Moluccan Cockatoo, is or was endangered primarily by over-trapping, as much suitable habitat survives.

Looking long-term, it might appear that the only endangered species of Indonesian parrots which will survive in aviculture will be the cockatoos and perhaps the Red and Blue, Black-winged and Chattering Lories. However, I have my doubts whether any of them will survive in the USA. Nearly all the cockatoos are hand-reared as pets without any regard to producing parent-reared young for future breeding stock. (Breeding from hand-reared male cockatoos has so far proved to be very difficult or impossible.)

I appeal to everyone breeding these birds to consider more carefully the species they keep and the manner in which they rear them. If commercial aspects are the only consideration, then aviculturists will soon lose all claim to being conservationists.

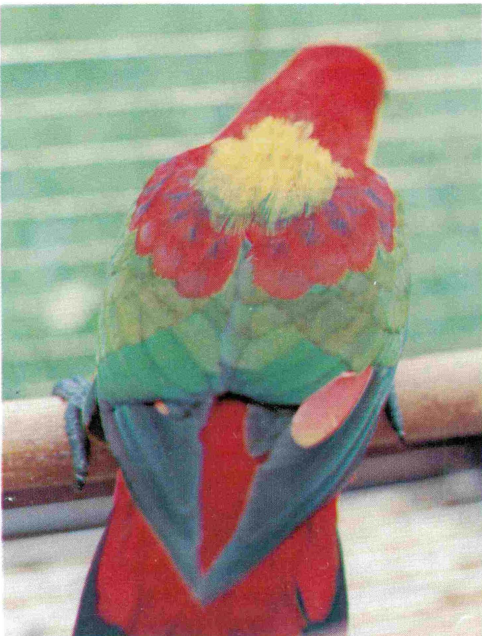
Breeding endangered species has no relevance to the conservation of that species in aviculture if they are produced only for the pet trade. We have to realize that of all the genera-

Advertiser's Index

Aves Communications & Promotions	26
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Caged Bird Hobbyist Magazine	39
China Prairie Company	17
Cuttlebone Plus	25
Everybody's Bird Mart (Pomona, CA)	46
For The Birds	37
Grubco	15
Hagen, Rolf C. (USA) Corp. - Tropicana	13
Humidaire Incubator Company	57
Lima's Exotic Birds	27
L/M Animal Farms	inside back cover
L & M Bird Leg Bands	45
Lyon Electric Company, Inc.	47
Magnolia Bird Farm	37
Premium Nutrition/ZuPreen	inside front cover
Sun Seed Co. Inc.	back cover
Sunshine Bird Supplies	9



Photo by Robert A. Wall



The Chattering Lory (above) is one of the most strikingly colored of all parrots. The lower left photo shows the bright yellow patch that gives the yellow-backed Chattering Lory its name.

The Salvadori's Fig Parrot is sexually dimorphic as an adult. The male has a red bar across the breast and the female has much more blue on her head.

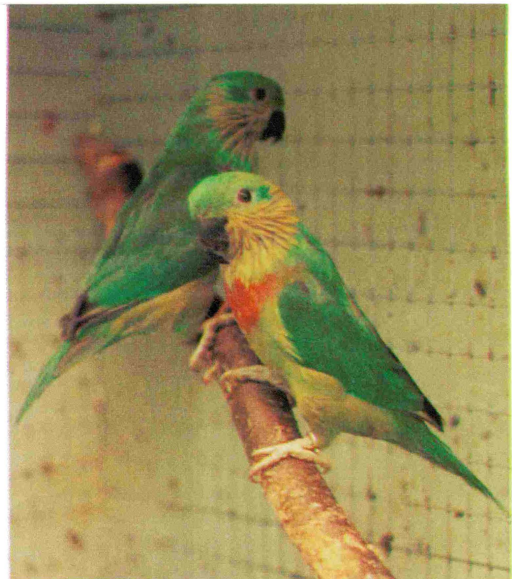


Photo by Ubaldo Leli, MD



The adult Blue-naped cock bird shows the blue on the crown of the head.



From another viewpoint, the very beautiful colors and patterns on the wings can be seen...

The Black-winged Lory is endangered in its native habitat in Indonesia. Those that are in aviculture must be carefully managed.

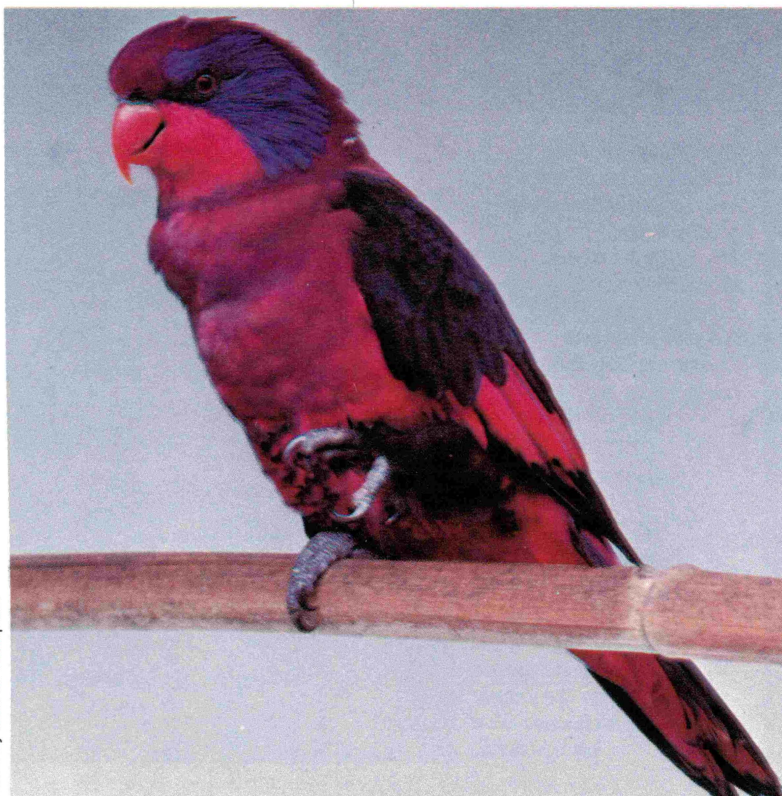


Photo by Dale R. Thompson



Photo by George D. Dodge and Dale R. Thompson

This pair of Moluccan Cockatoos reproduced well in an avicultural setting but the species is endangered in Indonesia.

tions of bird breeders who have ever lived, we are the only ones who hold in our hands the survival of many species in aviculture and even, in some cases, the very survival of the species itself. If those birds represent little more than dollars to us, we are not worthy of having them in our care.

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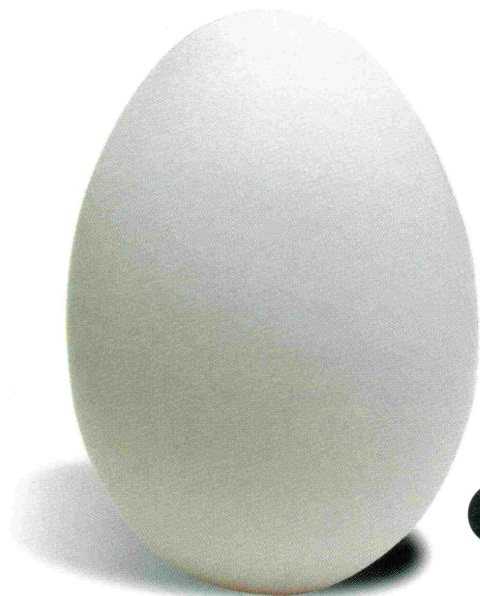
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